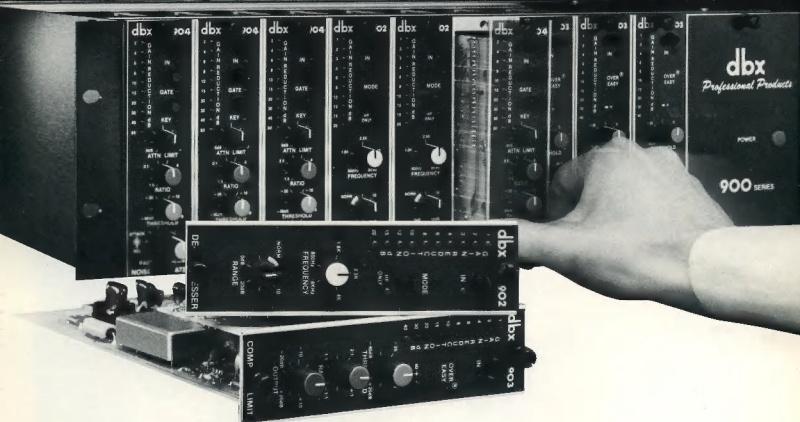


# THE DBX 900 SERIES MODULAR SIGNAL PROCESSING SYSTEM.



Today signal processing plays a greater role in sound production than ever before, both in the studio and on the road. As a result, rack space is at a premium. Innovative packaging eliminates redundant power supplies, simplifies interconnects, and saves space. With this in mind, dbx has created the 900 Series Modular Signal Processing System.

The dbx 900 Series features convenience with flexibility. You can fit up to 8 sophisticated signal processing modules into a

rackmount unit measuring just 5¼" high. Each 900 Series module represents a step forward in state-of-the-art technology. Installation is quick and easy to accomplish. Standard connectors enable you to wire the rack into your system like any other component. The interchangeable signal processing modules slip in and out in seconds.

The dbx 900 Series is the ultimate in flexibility. These modules place at fingertip control creative tools to express your unique sense of artistry in sound production.

# DBX 900 SERIES SIGNAL PROCESSING MODULES.

**The Model 902 De-esser** can be used as a conventional broadband de-esser, or for attenuating only a user-determined portion of the high-frequency range of the audio signal. Gain reduction is adjustable from 0 to -20 dB. A feature unique to the 902 (not found in other de-essers) is its continuous analysis of the input signal spectrum, thereby providing the exact amount of de-essing selected regardless of signal level. The 902 does not require recalibration for signal level changes. Just set it out and forget it.

Input Impedance: Balanced = 25K Ohms  
Unbalanced = 18.5K Ohms  
Output Impedance: 22 Ohms, designed to drive 600 Ohms or greater  
Maximum Input Level: +24 dBm  
Maximum Output Level: +24 dBm into 300 Ohms or greater  
Frequency Response: 20Hz-20kHz (+0, -1 dB)  
Distortion: THD at 1kHz < .02%  
Equivalent Input Noise: -82 dBm, 20Hz-20kHz Bandwidth, unweighted  
Attack Rate: Program dependent - 2ms for 10 dB above threshold, 600µs for 20 dB above threshold to achieve 63% gain reduction.  
Release Rate: 925 dB/sec  
De-essing Range: Operates uniformly over input range of -40 dBm to +24 dBm without requiring adjustment.  
Maximum "Ess" Attenuation: Variable 0 to >20 dB  
De-Ess Crossover Point: Variable 800Hz to 8kHz  
Filter Type: 12 dB/Octave phase coherent Gain: Unity  
Controls: Frequency, Range  
Switches: In/Out, Mode (HF ONLY/Normal)  
Indicators: In/Out, HF ONLY  
Metering: LED Column - 1,2,3,4,6,8,10,12,15, 20 dB gain reduction  
Power Supply Requirements: ±15V  
Regulated at 60ma, ±24V Unregulated at 30ma  
Dimensions: Front Panel 5¼"H x 1½"W, Card depth behind panel 9½"

## Features

1. No dynamic threshold to set
2. Two gain reduction modes (Broadband or HF only)
3. Adjustable crossover frequency
4. Adjustable gain reduction range
5. Control voltage output



**The Model 903 Compressor** gives you all the features you'd expect from dbx. And then some. For starters, you have at your command a unique new negative compression feature that actually begins reducing output volume once the threshold is exceeded. Signals are given a new and unusual sense of "punch." And the 903, like our acclaimed 165, is an Over Easy® compressor, with a soft knee threshold that increases compression ratio gradually over a range of several dB. It features true RMS level detection, continuously variable compression ratios, and a threshold that's adjustable from -40 dB to +20 dB.

Input Impedance: Balanced = 25K Ohms  
Unbalanced = 18.5K Ohms  
Output Impedance: 22 Ohms, designed to drive 600 Ohms or greater  
Maximum Input Level: +24 dBm  
Maximum Output Level: +24 dBm into 600 Ohms or greater  
Frequency Response: 20Hz-20kHz (+1, -1 dB)  
Distortion: 2nd Harmonic .05%, 3rd Harmonic .2% typical at ∞ compression, 1kHz, 0 dBm  
Equivalent Input Noise: -88 dBm  
Attack Rate: Program Dependent - 15ms for 10 dB above threshold, 5ms for 20 dB above threshold to achieve 63% gain reduction measured in ∞ compression region of Over Easy® curve  
Release Rate: 120 dB/sec  
Threshold: Variable -40 dBm to +20 dBm (7.75mV to 7.75V)  
Compression Ratio: Variable (1:1) - (∞:1) - (-1:1)  
Output Gain: Variable -20 dB to +20 dB  
Detector Input Impedance: Balance = 250K Ohms  
Unbalanced = 185K Ohms  
Controls: Threshold, Ratio, Output  
Switches: In/Out  
Indicators: In/Out, ∞+  
Metering: LED Column - 1,2,4,6,8,10,15, 20, 40 dB gain reduction  
Power Supply Requirements: ±15V  
Regulated at 60ma, ±24V Unregulated at 30ma  
Dimensions: Front Panel 5¼"H x 1½"W, Card depth behind panel 9½"

## Features

1. Over Easy® threshold
2. "Through Infinity" compression ratios
3. Detector input access



**The Model 904 Noise Gate** is the ultimate noise gate, with a combination of features not found on any other noise gate, at any price. It features adjustable attack and release rates, threshold adjustment from -40 to +10 dB, attenuation limit adjustment from 0 to 60 dB, with dbx Over Easy® downward expansion for a smooth sound. It also features a KEY input that allows gating of one instrument by another.

The special GATE mode of the 904 allows users without automated consoles to put threshold programmed muting on solo channels. After the user sets the correct solo level on the console, the 904 will automatically keep the channel muted, eliminating spurious signals which frequently precede the solo itself. When the solo begins, the 904 will un-mute the channel, allowing the solo into the mix at the pre-set level.

Input Impedance: Balanced = 25K Ohms  
Unbalanced = 18.5K Ohms  
Output Impedance: 22 Ohms, designed to drive 600 Ohms or greater  
Maximum Input Level: +24 dBm  
Maximum Output Level: +24 dBm into 600 Ohms or greater  
Frequency Response: 20Hz-20kHz (+0, -1 dB)  
Distortion: THD at 1kHz < .02%  
Equivalent Input Noise: -82 dBm, 20Hz-20kHz Bandwidth, unweighted  
Attack Rate: Variable 500 dB/ms to 2.5 dB/ms  
Release Rate: Variable 2.5 dB/ms to 22 dB/sec  
Threshold: Variable -40 to +10 dB (7.75 mV to 2.5 V)

Expansion Ratio: Variable 1.5:1 - 5:1

Maximum Attenuation: >60 dB

Key Input Impedance:

Balanced = 250K Ohm

Unbalanced =

185K Ohm

Controls: Attenuation

Limit, Ratio,

Threshold, Attack,

Release

Switches:

In/Out, Gate, Key

In/Out, Gate, Key

Metering: LED

Column - 2,4,6,8,10,15,

20,30,40,60 dB gain

reduction

Power Supply

Requirements:

±15V

Regulated at 60ma, ±24V Unregulated at

30ma

Dimensions: Front Panel

5¼"H x 1½"W, Card

depth behind panel 9½"

## Features

1. Over Easy® expansion
2. External "Key" input
3. Gate Mode
4. Control Voltage output (50mV/dB)



### The Model 905 Parametric Equalizer

offers a unique degree of equalization flexibility in a high density format without sacrificing true, fully parametric operation of all three filter bands. The overlapping bands each offer control of frequency, bandwidth (Q), and up to 15 dB of reciprocal cut or boost to provide exact, complementary filter action for most equalization needs. For problem situations requiring the removal of spurious signals, each of the bands can be independently switched into "infinite notch" mode without affecting the operation of the others. In situations where a shelving equalizer will produce better results than a peaking one, the 905's high and low bands can be independently switched from peaking to shelving operation. The entire unit may be switch bypassed for instant before/after comparisons. The 905 is the complete equalizer package right at your fingertips.

Input Impedance: Balanced = 25 k $\Omega$

Unbalanced = 18.5 k $\Omega$

Output Impedance: 22 $\Omega$ , designed to drive 600 $\Omega$  or greater

Maximum Input Level: +24 dBm

Maximum Output Level: +24 dBm into 600 $\Omega$  or greater

Frequency Response: 20 Hz-20 kHz (+0, -1 dB)

Distortion: THD at 1 kHz < 0.03% under any condition of boost or cut

Equivalent Input Noise: -90 dBm, 20 Hz-20 kHz Bandwidth, unweighted

Filter Type: Symmetrical peak/dip (3 band), high and low frequency bands switch selectable to symmetrical shelving. All bands selectable to notch mode

Center Frequencies: Low band = 20 Hz-500 Hz, Mid band = 200 Hz-5 kHz, high band = 800 Hz-20 kHz

Range:  $\pm 15$  dB, peak or shelf mode

Notch Attenuation:  $\geq 40$  dB at maximum Q setting

Auxiliary Outputs: Each band output available separately. Outputs are low impedance, designed to drive 5 k $\Omega$  or greater.

Controls: Frequency (3 bands), Q

(3 bands), boost/cut (3 bands)

Switches: In/out, peak/shelf

select (2 bands), "infinite"

notch select (3 bands)

Metering: LED indicator,

monitors all critical

circuitry for overload.

Power Supply

Requirements:  $\pm 15$  V

regulated at 100 mA,  $\pm 24$  V

unregulated at 30 mA

Dimensions: Front panel

5 1/4" H x 1 1/2" W, card depth

behind panel 9 1/2"

Features:

1. Overlapping bands
2.  $\pm 15$  dB range
3. "Infinite" notch mode
4. Multipoint overload sensing



**The Model 906 Flanger +** answers the need for an electronic system that achieves precise, predictable control of the flanging effect while providing the signal quality, 100:1 frequency sweep, and low noise previously obtained in the studio by using matched tape machines. But this is only the beginning, because the 906 is also a high quality doubler. Both of these basic operating modes can be controlled 1) manually, 2) by the internal sweep generator which offers variable sweep speed and a choice between two different sweep waveforms, 3) by the internal random noise source or, alternatively, an external source such as another 900 Series module's control voltage output, a synthesizer or automation system or 4) any of the many possible blends of these control sources. The complex results of the control voltage combinations are simply and clearly indicated by the continuously updated LED display.

The 906 has been designed with real applications in mind, and the control ranges are carefully tailored so that the user is not forced to get all his favorite effects within a narrow adjustment "window" on a control. The user is provided with control of delay feedback, dry/effect mix (including phase reverse), flange/double mode selection and effect bypass. The 906 also features stereo outputs for obtaining a spacious, stereo effect from mono sources. The model 906 Flanger + not only offers true "tape flanging" sound with unprecedented control, it provides a vast range of flanging and doubling effects. All in a compact package which can be plugged directly into any dbx 900 Series module frame.

Input Impedance: Balanced = 25 k $\Omega$ , Unbalanced = 18.5 k $\Omega$

Output Impedance: 22 $\Omega$ , designed to drive 600 $\Omega$  or greater

Maximum Input Level: +24 dBm

Maximum Output Level: +24 dBm into 600 $\Omega$  or greater

Frequency Response: 20 Hz-12 kHz (+0, -3 dB)

Distortion: THD at 1 kHz < 5%

Equivalent Input Noise: -85 dBm

Delay Range: Flange mode = 100ms to 20ms, double

mode = 4ms to 40ms

Modulation Frequency: 1 Hz to 10 Hz

Modulation Waveforms: Triangle, sine

Random Modulation: f<sub>r</sub> = 1 Hz

Modulation Depth: 0-100%

Feedback: 0-99%

Auxiliary (Stereo) Output:

+20 dBm into 600 $\Omega$  or greater

Control Voltage

Output/Input: Output

mode = 600 $\Omega$  output

impedance, Input

mode = balanced

250 k $\Omega$ , Single ended

185 k $\Omega$

Controls: Manual delay

time, modulation

depth, modulation

mix, sweep speed,

feedback, audio mix.

Switches: In/out, mode

(flange/double),

audio phase reverse,

modulation select

(noise/external),

modulation

waveform

(sine/triangle)

Indicators: In/out,

flange/double, phase

rev. noise/ext.

sine/triangle

Metering: LED column 2, 4, 6,

8, 10, 12, 14, 16, 18, 20, mS

delay

Power Supply

Requirements:  $\pm 15$  V, regulated at 100 mA,

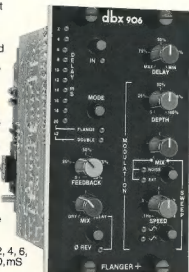
$\pm 24$  V unregulated at 30 mA

Dimensions: Front panel 5 1/4" H x 3" W, card depth behind

panel 9 1/2"

Features:

1. Wide frequency response
2. Wide delay range
3. Low noise
4. Versatile selection of modulation sources



### More to come.

We're not stopping with these modules, either. Check with your local dbx Professional Products Dealer for introduction dates.

# dbx<sup>®</sup>

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**WARRANTY:** dbx products are covered under a limited warranty (parts and labor) for two years from date of original purchase. Specifications subject to change without notice. Manufactured under one or more of the following U.S. patents: 3,661,618; 3,714,462; 3,789,143; 4,101,849; 4,097,767. Other patents pending.

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